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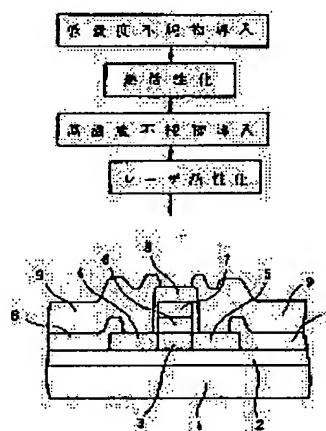
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(54) THIN FILM SEMICONDUCTOR DEVICE AND MANUFACTURE THEREOF

(57)Abstract:

PURPOSE: To activate impurity without generating the exfoliation of a poly-Si film, form a TFT of small leak current, and extremely reduce the defect of a display, by activating first introduced low concentration impurity by heat treatment at about 600° C, and activating second introduced high concentration impurity by using laser.

CONSTITUTION: A base SiO₂ film 2 is deposited on a glass substrate 1 whose strain temperature is about 640° C; P-type poly-Si films 3-5 are deposited; by heat treatment at 600° C for 5 hours, the poly-Si films 3-5 are recrystallized, and impurity in the films are activated; a gate insulating film 6 is deposited; an I-layer poly-Si film for a gate electrode 7 is deposited; after the gate electrode is patterned, P is introduced; an SiO₂ film 8 is deposited; by using XeCl laser, N-type impurity (P) is activated; after photoetching process, a transparent electrode (ITO) is sputtered; after photoetching process, liquid crystal is encapsulated between a polarizing plate and another glass substrate provided with a color filter, thereby completing a display.



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